KOLDTECH
The Technology of Excellence

Refrigerated Display Cabinet

Curved Glass Display Cabinet (RCD Series)

RCD-9, RCD-12, RCD-15, RCD-18, RCD-20

User Manual

Updated 10 January 2006

IMPORTANT DOCUMENTATION
READ THIS DOCUMENT BEFORE USE
RETAIN THIS DOCUMENT FOR YOUR RECORDS

INTRODUCTION

About Koldtech

Thank you for choosing our KOLDTECH product. With over 30 years of experience in refrigeration manufacturing we are confident that our product will provide you with years of trouble-free operation. Our products are fully engineered to be amongst the best available. We are continually improving our product designs to ensure we are taking advantage of latest concepts, designs and technological advancements. Every unit is fully tested in our calibrated laboratory prior to leaving our factory.
As with other precision equipment, proper care, maintenance and operation will ensure years of trouble-free service. Please take time to thoroughly read this manual before using the unit to familiarize yourself with our product.
We thank you again for choosing KOLDTECH. If you have any further questions please feel free to call the dealer from whom you purchased the unit.

Koldtech in Australia

Koldtech products are imported into Australia by STODDART (Tom Stoddart Pty Ltd) as the sole Australasian agent. Stoddart are one of Australia's largest commercial kitchen companies, with a 45 year history of manufacturing and importing a range of products for the food service industry. Stoddart has a network of quality distributors and service agents throughout Australasia who service the catering and food service market. Stoddart administer the after sales service and spare parts for all Koldtech products in Australia.
Our contact details can be found under the "Warranty, Service and Repair" information section of this manual.

INSTALLATION AND START UP

Please follow these instructions carefully on receipt of your Koldtech product and follow the instructions.

Receipt

Your Koldtech product is supplied with extra heavy duty packaging to minimize potential damage caused in transport. On receipt of your product please check for any signs of damage to the crate. Should the crate show significant signs of damage, please note this **prior** to opening and uncrating the product. **Also please sign the delivery docket from the transport company indicating that the product has been received damaged.**

Uncrating

While unpacking, take note of any damage to the unit. If damage is found, do not discard the packing materials and notify your dealer or the freight company as soon as possible. Do not proceed to install the unit. If no damage is found, the unit should be left on a skid or pallet until placed in the desired location. Clear away any packing material that may be used to secure the unit during transit.

Settling

Precaution has been taken to ship the unit in an upright position. If the unit is tilted during transit, lubricating oil may have shifted from the reservoir. If this has happened operating the unit may cause excessive wear or damage to the compressor's moving parts. **It is recommended that the unit be left standing for 24 hours before operation.**

Positioning

Position the unit in a dry, well-ventilated place away from heat sources or any vibration. The unit should be set on a level and firm surface. The rear of the cabinet has special vents to enable the refrigeration unit to get appropriate air-flows. **Do not block these vents as these may cause the unit to malfunction and void warranty.** Ideally for optimum performance, we recommend installation in air-conditioned premises. In the event of high relative humidity, condensation may form on the cabinet. This will not impact on the ability of the cabinet to maintain internal temperature. However, should ambient temperature exceed 35^{o}C we cannot guarantee the maintenance of internal temperature to required standards.

Draining

All standard models are supplied with a condensate evaporator tray. No drain is required for these units. Special models may require a drainpipe for condensate water; in such instances this is the responsibility of the operator.

Ventilation

Ventilating grills or louvers must not be obstructed for correct operation. Do not butt items directly against the glass as this will restrict the movement of warm air on the glass, which is designed to prevent condensation. **Do not block these vents as these may cause the unit to malfunction and void warranty.**

Internal arrangement
Remove all internal packaging including plastic, masking tape and polystyrene. Your RCD unit is supplied with glass to fit on top of the fixed stainless steel shelves. Unwrap these shelves from their special packaging. Wash all shelves including the glass and the stainless steel shelves using soap and water. Do not use solvents or chloride based cleaners on any surfaces as this may cause surface blemishes which will not be covered under warranty. Inside the cabinet you will find circular rubberized discs which are for the glass to rest on (four per piece of glass). Place the discs on the stainless shelves in a position which is about 1 inch in from where the corner of the glass shelves will sit. Carefully, place the glass on top of the discs.

Doors
The unit is supplied with sliding rear doors which are usually taped in position to the main cabinet. Sometimes they may be packed separately within the main cabinet. Should the doors be wrapped separately carefully unwrap these doors and check for any damage. Any damage should be reported immediately to the company from whom you bought the product or your transport company.
To fit the doors, position them correctly outside the cabinet. The top of the door will have a spring fitted to it which also connects to a fixing on the door frame (this makes the door self-closing). The door handle faces outwards and flush with the end of the unit, the roller wheels are situated at the bottom of the door. When the door is correctly aligned, lift it up and put into position by placed the top of the door into the top track, adjusting the door so it sits vertically over the bottom track. Gradually lower the door so it sits in the bottom track. Check it is correctly position by sliding the door. If the door slides smoothly in its track it is correctly positioned, otherwise lift the door and repositioning correctly in the track.
These units have self-closing doors which work via a spring mechanism attached to the top of the door. When fitting, attach the spring to the fitting at the end of the top track.

Note: RCD-9 may have hinged doors. To adjust these doors, loosen screws in top and bottom hinge just enough so you are able to slide the doors back and forth when they are closed and will not loose their new position. Slide doors towards or away from the centre to even up the gap. Open doors and tighten screws again.

Electrical Work Preparation
For safety reasons, the unit must be properly earthed. Check and make sure that the outlet is properly grounded. If a grounded plug is not available, a separate earth ground must be installed to prevent any electrical hazard. A properly rated circuit breaker should be installed to the supply outlet. Check for proper supply voltage before plugging in the unit. Please refer to voltage requirements on the nameplate of the unit. Plug the unit into the wall outlet. Turn the power point on.

Starting the cabinet for the first time
At the lower rear of the unit of the main body are mounted the unit controls. These include switches for the refrigerator, lights and a controller for the refrigeration.
Switch on the refrigeration first and check if there are any unusually strong odours, heat, smoke or vibration. If any of these are present, immediately turn off immediately and unplug the unit and call for a service technician. Should none of these problems arise leave the refrigeration to run for about thirty minutes and monitor the digital thermostat read-out to ensure the temperature is dropping.
Once it becomes clear that the temperature is dropping turn on the lights by flicking on the separate light switch. Check all fluorescent lights are illuminated (one per shelf). If not, turn off the lights. It is possible for some light contacts to work slightly loose during transit and can be corrected by disconnecting the unit from the mains power and simply ensuring the tube is correctly in position. If the lights still do not work contact your dealer. The unit should be closely monitored during the first full hour of operation to ensure the temperature drops to a suitable temperature.

Product Loading
The thermostat is set at the factory for optimum operating temperature. The time taken to attain the operating temperature depends on the temperature of the food being loaded, the frequency of the door opening, ambient temperature etc. The unit should reach operating temperature during the first two hours of operation

Machine Performance
To prevent compressor damage, the unit is equipped with a Time Delay Circuit, which shall activate the compressor within 3 minutes after turning on the power or after restarting.

ONGOING USE AND OPERATION

General guidelines for use
This cabinet is designed for displaying products in optimal conditions for as long as acceptable food standards are maintained. The unit is designed and manufactured for commercial use. The lifespan of products stored in the cabinet will vary in depending on the type of food, the storage temperature, the number of times doors are opened, the ambient temperature and so on. It utilizes unique refrigeration design principles to help maximise the shelf life of the product.
As an operator it is vital to continue to monitor the core temperature of foods and the amount of time foods have been kept.

Display Lighting
The fluorescent lighting in the cabinet is designed to improve the display area and maximize visibility of your food products. Whilst the lighting has little effect on the product, food will generally last longer with lights turned off, because the refrigerator will not have to counter the small amount of heat that the lights give off. Therefore we recommend turning the lights off during non-service times.
All lighting is fitted with special PVC diffusers. These diffusers improve the light in the cabinet whilst protecting the tubes and fittings against accidental damage. These diffusers are designed especially for display refrigeration whilst the fridge is operating.

Do **not** run the **lighting without the refrigeration being turned on** as this will damage the diffusers.

Product storage

Your products can be left overnight in the refrigerated cabinet if you choose. Any product not originally packaged in a box or container are best removed and refrigerated overnight as the defrost cycle will kick in and may spoil products containing fresh ingredients i.e. Cream. If you choose to leave product in the cabinet ensure the **lights** are **turned off overnight**. Products will last longer if they are covered or boxed during non-service times.

Daily Operating Procedures

If the unit is not used for storage turn the refrigeration unit on for approximately 30 minutes prior to use to enable the temperature to get to the right setting. **Do not fill the cabinet until it has reached the correct temperature.** Also note that placing several warm or unrefridgerated products in the cabinet at one time will increase the time it takes for the products to meet the appropriate temperature. Ideally, products placed in the cabinet should come directly from a refrigerator, blast chiller or coldroom. Frozen product can also be placed in the cabinet, however, the product should obviously left to thaw prior to serving. We recommend that you clean your cabinet no less than daily. Ideally keep the cabinet clean throughout the day and have one major clean at the end of the day after use to prevent soiling and the growth of bacteria. Ensure all items are fitted to the cabinet including doors and shelves. Doors should be left on at all times to ensure standards are met and to prevent potential problems with the refrigeration system icing up.

Defrosting

The cabinet features an automatic defrost cycle which occurs at various times during the day. Automatic defrosting is set by the factory for optimum operation. Do not attempt to alter the setting. During the defrost cycle the temperature displayed on the controller will rise slightly for a short period. This is not a fault and no action is necessary during this period.

Cabinet Cleaning

To ensure proper maintenance of your unit and longevity there is a simple four step process that should be followed when cleaning Stainless Steel surfaces, P.V.C. Surfaces and Display Glass. This process is as follows:

Step One: Ensure that the unit is **switched off** at the power point and unplugged.

Step Two: The end-user should wash the unit using lukewarm, soapy water or suitable cleaner.

Step Three: Thoroughly rinse or wipe all surfaces with water or a dampened soft, clean cloth (or sponge) respectively.

Step Four: Finally, polish with dry soft cloth

CAUTION:

Do not use solvents or other aggressive liquids for cleaning e.g. with mixture of chlorine or detergent etc.

Do not use wire brush, steel wool or grainy wiping pad such as Scotchbrite.

In some areas, particularly in **beach locations**, stainless steel can be subject to surface discoloration or “tea staining”. This can be removed with an appropriate cleaning agent that contains 10% Sodium citrate. Ask your supplier of cleaning chemicals for a suitable brand.

MAINTAINANCE

The maintenance instructions below are for basic maintenance that should be done on a regular basis by the owner/operator.

IMPORTANT NOTE

THE ELECTRICAL AND REFRIGERATION COMPONENTS OF THIS PRODUCT SHOULD ONLY BE ACCESSED BY A SUITABLY QUALIFIED AND EXPERIENCE TRADESPERSON. DO NOT ATTEMPT TO DISASSEMBLE THE UNIT IN ANY WAY. ANY UNAUTHORISED DISSASSEMBLY, ALTERATIONS OR ACCESS TO PARTS WILL VOID YOUR WARRANTY.

- Observe safe practice by disconnecting all electrical supply before performing any kind of maintenance.
- Do not use sharp instruments or cleaning agents on the unit. Clean (interior and exterior surfaces) using a damp cloth and warm water. Food particles and spillage should be removed as soon as possible to avoid build-up and odour.
- To ensure efficiency and reliability it is important that the condenser coil be kept clear of accumulated dirt and duct. It is recommended to use a non-metallic brush, vacuum cleaner or air blower to dislodge dust from the condenser fins. The frequency of cleaning depends on the amount of dust in the surrounding area of the installation. **The condenser should be inspected and cleaned at least once every month.** The evaporator fan and the areas below the grilles inside the unit need to be checked weekly for food stuffs and removed if found. **Failure to undertake routine maintenance such as cleaning the condenser coil will void the product's warranty.**
- Do not expose any electrical components to moisture or water. If the unit gets wet, turn it off and unplug it from the wall outlet immediately. Do not turn it on again until the unit is completely dry or after inspection by a qualified service technician.
- Should the unit be left unused for an extended period, all food items should be removed. The interior surface and shelves should be cleaned thoroughly. Unplug the unit from the power source and leave the doors slightly opened.

RECOMMENDED MAINTENANCE SCHEDULE

Please ensure you follow the schedule below to maintain the appropriate storage conditions for your food and to prolong the life of your cabinet.

Maintenance List	Frequency		
	Daily	Weekly	Monthly
Clean interior and exterior surfaces	X		
Check operating temperature	X		
Check control panel alarm	X		
Check compressor for vibration		X	
Check compressor temperature		X	
Check condenser fan		X	
Clean condenser coil*			X

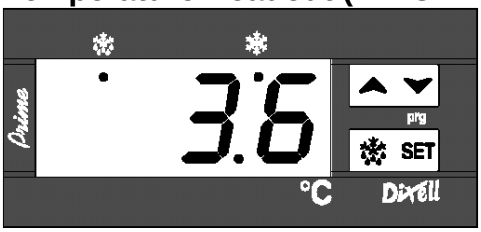
*We recommend that you include your refrigerated display case in a regular maintenance schedule for all commercial food equipment. Cleaning of condenser coils is best done by trained and qualified technicians. Failure to undertake routine maintenance such as cleaning the condenser coil will void the product's warranty.

TEMPERATURE SETTING

General Information

Your KOLDTECH product is equipped with an electronic thermostat with off cycle designed for refrigeration applications at normal temperature. It provides a relay output to drive the compressor and a probe input. An internal timer manages the off cycle defrost. **This temperature does NOT indicate the temperature of the food product or the storage temperature in the actual display case**.

Temperature Readout (IMPORTANT INFORMATION)



Your Koldtech fridge is fitted with a digital thermostat controller. On this controller is clearly displayed a temperature setting in Celcius (^{o}C). **This readout is indicative of the temperature being read by a probe in the warmest section of the cabinet** (where the air return into the refrigeration and **not a storage area**) and is used to ensure that the fridge performs to the optimum level. **This temperature does NOT indicate the temperature of the food product or the storage temperature in the actual display case**.

For compliance to food hygiene standards you must measure the core temperature of the food product using a suitable calibrated device. Similarly the storage temperature in the cabinet should be measured in the storage area not by relying on the digital readout.
Before making any adjustments to the preset temperature ensure you have fully tested the actual cabinet temperature. **By adjusting the temperature on the thermostat to a setting that is either too hot or too cold you will either reduce the product shelf life or risk food borne bacteria.**

Recommended Temperature Settings

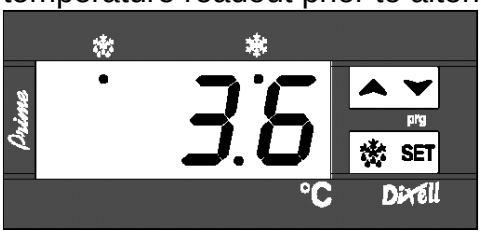
See the table below for recommended preset temperatures for **specialized use**.

Item Being Stored	Recommended Preset Temperatures
Sandwich	2 to 5 deg C
Cakes	4 to 8 Deg C

Note: (Consult factory when needed, self-adjustment may void the given warranty)

Front Panel Commands

Refer to these instructions to adjust the thermostat control settings (please read note about temperature readout prior to altering the settings).



SET: refers to display target set point, in programming mode it selects a parameter or confirms an operation.

❄ **(DEF)** Presses for more 2 seconds to start a manual defrost.

▲ **(UP)** Press to see the maximum stored temperature.

▼ **(DOWN)** Press to see the minimum stored temperature.

Key Combinations:

▲ + ▼ Lock and unlock the keyboard.

SET + ▼ To enter in programming mode.

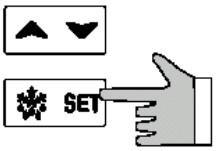
SET + ▲ To return to the room temperature display.

Use of LEDS

Each LED function is described in the following table

LED	MODE	FUNCTION
❄	ON	Compressor enabled
❄	Flashing	-Programming Phase (flashing with ❄) - Anti-short cycle delay enabled
❄	ON	Defrost enabled
❄	Flashing	- Programming Phase (flashing with ❄) - Drip time in progress

Changing the Set Point



Press the SET key for more than 2 seconds to change the Set point value.
The value of the set point will be displayed and the ❄ LED starts blinking.
To change the Set value, pushing the ▲ or ▼ arrows within 10 sec.
To memorize the new set point value, pressing the SET keys again or wait 15 sec.

Alarm Signals

Display	Cause	Output
"EE"	Data or memory failure	
"P1"	Room probe failure	Output according to par. "Con" and "COF"
"HA"	Maximum temp. alarm	Output unchanged.
"LA"	Minimum temp. alarm	Output unchanged.
"EA"	External alarm	Output unchanged.
"CA"	Serious external alarm	Output OFF.

Note:
The setting of operating temperature (and defrost for freezer) is already factory set.
End-user self- adjustment may void the given warranty unless consulted by the **authorized** persons to do so. The parameter-setting table above is for the purpose of the reference only. The Manufacturer, importer and distributors cannot guarantee that these settings will work in all environments and with different food stuffs. Proper tests should be conducted on site to ensure compliance to standards is achieved.

WARRANTY, SERVICE & REPAIR

KOLDTECH warrants equipment sold against defects in material and workmanship for a period of twelve (12) months from the date of invoice. You will need to provide proof of purchase (an invoice) to prove the warranty period. Access to warranty is conditional on the equipment being correctly installed, cared for and operated under normal conditions.

The warranty does not cover:

- Any consequential loss, damages or expenses directly or indirectly arising from use or attempted use or from any other cause.
- Any part of the product which has been subject to misuse, neglect, alteration, incorrect installation, accident, use of inappropriate chemicals, flooding, fire or acts of God.
- Damage caused during transportation.
- Breakage of glass, bulbs, elements, lamps or plastic components or the replacement of gaskets or fluorescent tubes.
- Penalty or additional labour costs for installation, removal or repair of the product outside normal working hours. Normal working hours are considered to be 8:00 AM til 4:30 PM Monday to Friday (Australian Eastern Standard Time)
- Warranty is also voided if unauthorized service or repairs are carried out to items during the warranty period, however common sense prevails, if in an emergency situation occurs suitably qualified personnel must carry out all work. Eg. Electrician, Gas fitter etc. We will not incur costs for works carried out by others, without our **prior** approval.

All warranty parts requested will be charged to the customer's account unless a warranty claim is approved. Standard credit policies will be applied.

Claiming Warranty

If your KOLDTECH product is not working while still under warranty and has not been subject to improper use or treatment, follow the procedure listed below to obtain repairs:

- Locate the rating plate sticker on your KOLDTECH product to enable you to complete the details on the Warranty Request Form.
- Complete the form with all requested details and fax a copy to the number shown, along with proof of purchase of the product.
- Manufacturer and the importer reserve the right to reject warranty calls where circumstances fail to meet their warranty conditions.

Service & Spare Parts

To arrange service on your KOLDTECH product in Australasia please contact your local distributor or the following:

STODDART
Tom Stoddart Pty Ltd

215 Jackson Road
Sunnybank Hills
Queensland 4109
Australia
Ph: (+61) 07 3344 2444
Fax: (+61) 07 3344 6166
Email: fse@stoddart.com.au